

Table 6-24: Landover No-build Condition Intersection AM and PM Peak Hour Operations Analysis

#	Intersection	AM Peak Hour					PM Peak Hour				
		HCM 2000		CLV		Check	HCM 2000		CLV		Check
		Delay (sec/ veh)	LOS	Critical Lane Volume	LOS		Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	
1	Landover Road & Old Landover Road (Signalized)	8.3	A	1,438	D	Pass	9.4	A	1,179	C	Pass
2	Landover Road & Pinebrook Avenue (Signalized)	9.5	A	1,189	C	Pass	10.8	B	1,401	D	Pass
3	Landover Road & Kent Town Place/75th Avenue (Signalized)	25.3	C	1,608	F	Fail	28.0	C	1,416	D	Pass
4	Landover Road & Kent Village Drive (TWSC)	0.1	-	N/A	N/A	Pass	0.2	-	N/A	N/A	Pass
5	Landover Road & Dodge Park Road (Signalized)	6.9	A	1,167	C	Pass	11.2	B	1,040	B	Pass
6	Landover Road & Fire House Road (Signalized)	8.2	A	1,186	C	Pass	15.3	B	1,295	C	Pass
7	Landover Road & Kenmoor Drive (Signalized)	8.5	A	956	A	Pass	5.1	A	977	A	Pass
8	Landover Road & Barlowe Road (Signalized)	7.1	A	931	A	Pass	10.1	B	1,072	B	Pass
9	Landover Road & Brightseat Road (Signalized)	38.2	D	1,220	C	Pass	55.1	E	1686.0	F	Fail
10	Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)	6.5	A	1,181	C	Pass	27.7	C	1,832	F	Fail
11	Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)	45.6	D	1,666	F	Fail	72.4	E	1,863	F	Fail
12	Landover Road & St. Joseph's Drive/McCormick Drive (Signalized)	52.3	D	1,546	E	Pass	89.9	F	1,921	F	Fail
13	Landover Road & Lottsford Road (Signalized)	42.2	D	1,507	E	Pass	63.5	E	1,531	E	Fail

#	Intersection	AM Peak Hour					PM Peak Hour				
		HCM 2000		CLV		Check	HCM 2000		CLV		Check
		Delay (sec/ veh)	LOS	Critical Lane Volume	LOS		Delay (sec/ veh)	LOS	Critical Lane Volume	LOS	
14	Landover Road & Technology Way (Signalized)	2.8	A	1,154	C	Pass	17.0	B	1,291	C	Pass
15	Landover Road & Arena Drive/Lake Arbor Way (Signalized)	34.2	C	1,161	C	Pass	33.3	C	1,166	C	Pass
16	Martin Luther King Jr Highway & Ardwick-Ardmore Road (Signalized)	95.8	F	1906.0	F	Fail	68.9	E	1,541	E	Fail
17	Brightseat Road & Ardwick-Ardmore Road (TWSC)	176.1	-	N/A	N/A	Fail	32.9	-	N/A	N/A	Pass
18	Brightseat Road & Glenarden Parkway (Signalized)	10.0	A	563	A	Pass	10.3	B	597	A	Pass
19	Brightseat Road & Evarts Street (Signalized)	1.7	A	281	A	Pass	2.1	A	322	A	Pass
20	Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd) (TWSC)	0.8	-	N/A	N/A	Pass	0.7	-	N/A	N/A	Pass
21	Brightseat Road/Redskins Road & Sheriff Road/Brightseat Road (Signalized)	36.4	D	413	A	Pass	33.0	C	596	A	Pass
22	Brightseat Road & Arena Drive (Signalized)	21.3	C	1,272	C	Pass	24.2	C	1,589	E	Pass
23	Arena Drive & I-95/I-495 Southbound Ramps (Signalized)	22.7	C	880	A	Pass	29.8	C	1,344	D	Pass
24	Arena Drive & I-95/I-495 Northbound Ramps (Signalized)	23.9	C	1,203	C	Pass	28.8	C	1,405	D	Pass

Notes:

LOS = Level of Service

TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is Measured in Seconds Per Vehicle.

Red cells denote intersections operating at unacceptable conditions.

**LANDOVER TRAFFIC
ENVIRONMENTAL CONSEQUENCES
SUMMARY**



No-build Condition: Direct, long-term, major adverse impacts to corridor-level traffic, and direct, long-term, adverse impacts to isolated intersections.

No-build Condition Queuing Analysis

Based on the Synchro™ and SimTraffic™ analysis, 14 signalized intersections and one unsignalized intersection would experience queuing lengths that would exceed the available storage capacity. The remaining intersections in the study area would provide sufficient storage for the anticipated demand. Compared to the Existing Condition, the No-build Condition would have no change in the number of intersections with failing queues during the AM peak hour and would have three more intersections with failing queues during the PM peak hour. The Landover TIA (Appendix D) contains a more detailed No-build Condition traffic queuing analysis.

Summary of Traffic Analysis: No-build Condition

Overall, the AM peak hour would experience corridor-based delays along Landover Road (MD 202) in the westbound direction beginning at McCormick Road/St. Joseph's Drive and extending past Lottsford Road approaching Arena Drive/Lake Arbor Road. A similar condition would occur during the PM peak hour beginning at I-95/I-495 southbound on-ramp and extending past Barlowe Road. Together these conditions would result in direct, long-term, major adverse corridor-level impacts. In addition, there would be isolated intersection impacts during the AM peak hour at the Martin Luther King Jr. Highway and Ardwick-Ardmore Road intersection and at the Brightseat Road and Ardwick-Ardmore Road intersection resulting in direct, long-term, adverse impacts.

6.2.9.2 Build Condition (FBI HQ Consolidation)

This section introduces the Landover Build Condition and summarizes the potential impact to the pedestrian network, bicycle network, public transit system, parking conditions, truck access, and traffic operations from the consolidation of the FBI HQ on the Landover site.

Build Condition Pedestrian Network

Under the Build Condition, Brightseat Road would undergo several improvements with the addition of a new access point to the Landover site and accommodation of the lane requirements for the entry control facility (ECF) improvements. Therefore, with construction already planned for this length of roadway, it is expected that sidewalk accommodations on Brightseat Road would be upgraded to meet Prince George's County standards and ADA compliance during the Build Condition. ADA accessibility and pedestrian access improvements would also be made as needed at remaining entry locations. Within the site, multiple pedestrian pathways would provide access to the Main Building and between site elements; the precise location of these pedestrian accommodations would be determined in the final site design process.

Not many pedestrians would access the Landover site via the surrounding pedestrian network because (1) the Landover site is not near Metrorail where riders could walk from the station and (2) the low-density suburban area means few employees are within a reasonable walking distance from the site or would travel there by foot. Pedestrians in the area would continue to use the sidewalk along Brightseat Road, and local area use of the sidewalk network may slightly increase with the improvements. Therefore, the Build Condition as planned would likely have direct, long-term, beneficial impacts to the pedestrian network, although the benefits would be minimal. There could also be direct, short-term, adverse impacts to the pedestrian network from construction vehicles crossing the sidewalk and intermittent sidewalk closures.

Build Condition Bicycle Network

The overall bicycle mode split to the Landover site is projected to be 1.0 percent, resulting in approximately 113 bicycle roundtrips daily. While no off-site bicycle improvements are planned as part of the Landover Build Condition, it is assumed that there would be bicycle facilities on-site to encourage the use of the bicycle mode of travel. The increase in bicycle trips from the Landover Build Condition would increase overall bicycle volumes in the study area.

Given the lack of bicycle facilities in the study area and no assured date of completion for planned improvements noted in the No-build Condition (see section 6.2.9.1), the increase in projected bicycle volumes would have a direct, long-term, adverse impact to the study area. There would be a negative impact because, without bicycle facilities, those who choose to bicycle would need to use sidewalks, conflicting with pedestrians, or use the roadways, creating conflicts with an increased number of vehicles on the road. There could be direct, short-term, adverse impacts to the bicycle network during construction caused by construction vehicles crossing the lanes and intermittent lane and sidewalk closures.

Build Condition Public Transit

The following sections describe the Build Condition for Metrorail and bus modes within the Landover study area. It is anticipated that there would be an increase in people commuting to the site via commuter bus or shuttle given the overall increase in total trips in the Build Condition. Also, the projected use of shuttles for future FBI employees is discussed.

Projected Trips

Section 3.10.4.2 details the basis of the Landover Build Condition trip generation calculation.

Metrorail Analysis

Overall, with a Metrorail mode split of 18.7 percent, a total of 616 additional AM peak hour passenger trips and 570 additional PM peak hour passenger trips are projected. Table 6-25 summarizes the additional Metrorail trips associated with the Landover Build Condition.

The additional peak hour Metrorail passenger trips were further disaggregated into AM and PM peak 15-minute periods using existing PHF at Largo Town Center Metro Station. Overall, this resulted in an additional 167 passenger trips during the AM peak 15-minute period and an additional 171 passenger trips during the PM peak 15-minute period, as summarized in table 6-26.

Overall, the Landover Build Condition would result in an additional 2,114 weekday entries at Largo Town Center Metro Station, bringing the weekday station entry total to 7,721 passengers (see table 6-27). Average weekday exits would theoretically be the same or similar to the average weekday entries.

Table 6-25: Landover Build Condition Additional Peak Hour Metrorail Passenger Trips

Employees	Time Period	IN	OUT	Proportion of Daily Total	Metrorail Mode Split	IN	OUT	TOTAL
11,055	AM Peak Hour	93%	7%	29.0%	18.7%	558	42	600
	PM Peak Hour	5%	95%	26.9%	18.7%	28	528	556
Briefing Center	Time Period	IN	OUT	Proportion of Daily Total	Metrorail Mode Split	IN	OUT	TOTAL
250	AM Peak Hour	100%	-	36.0%	18.7%	17	-	17
	PM Peak Hour	-	100%	29.2%	18.7%	-	14	14
Total People	Time Period					Exits	Entries	TOTAL
11,305	AM Peak Hour					574	42	616
	PM Peak Hour					28	542	570

Source: Landover Site Transportation Agreement (Appendix A)

Table 6-26: Landover Build Condition Additional Peak 15-Minute Metrorail Passenger Trips

Employees	Time Period	IN	OUT	TOTAL	Peak Hour Factor	Time Period	IN	OUT	TOTAL
11,055	AM Peak Hour	558	42	600	27%	AM Peak 15-Minute	151	11	162
	PM Peak Hour	28	528	556	30%	PM Peak 15-Minute	8	158	166
Briefing Center	Time Period	IN	OUT	TOTAL	Peak Hour Factor	Time Period	IN	OUT	TOTAL
250	AM Peak Hour	17	-	17	27%	AM Peak 15-Minute	5	-	5
	PM Peak Hour	-	14	14	30%	PM Peak 15-Minute	-	4	4
Total People	Time Period	Exits	Entries	TOTAL	Peak Hour Factor	Time Period	Exits	Entries	TOTAL
11,305	AM Peak Hour	574	42	616	27%	AM Peak 15-Minute	156	11	167
	PM Peak Hour	28	542	570	30%	PM Peak 15-Minute	8	162	171

Source: Landover Site Transportation Agreement (Appendix A); WMATA (2014k)

Table 6-27: Weekday 2022 Projected Metrorail Ridership at Largo Town Center

Metro Station	Average Weekday Entries					
	2014	2022 Background Growth	2022 Planned Development Projects	2022 Total No-build	2022 Additional Build Trips	2022 Total Build Trips
Largo Town Center	4,740	5,585	22	5,607	2,114	7,721

Source: Masog (2014); WMATA (2014k); MWCOC (2015); Landover Site Transportation Agreement (Appendix A)

LANDOVER PEDESTRIAN ENVIRONMENTAL CONSEQUENCES SUMMARY

 **Build Condition:** Direct, long-term, beneficial impacts.

LANDOVER BICYCLE ENVIRONMENTAL CONSEQUENCES SUMMARY


 **Build Condition:** Direct, long-term, adverse impacts.

Table 6-28: Landover Build Condition Weekday Peak 15-Minute Metrorail Passenger Loads

Measure (PM Peak 15-Minute Exits)	Unit
2014 Maximum Passengers	356
2022 Passengers with Background Growth	419
2022 Passengers with Development Projects	4
2022 Total No-build Passengers	423
2022 Minimum Trains ^a	3
2022 Train Cars ^b	20
2022 Total No-build Passengers Per Car	21
2022 Landover Build Additional Passengers	8
2022 Total Landover Build Passengers	431
2022 Total Landover Build Passengers Per Car	22

a A 4-minute headway equates to 3.75 trains every 15 minutes. This figure was rounded down to 3 minutes in order to provide the most conservative load estimate.

b Assumes two 6-car Silver line trains and one 8-car Blue line train. Source: Masog (2014); WMATA (2014k); MWCOC (2015); Landover Site Transportation Agreement (Appendix A)

Table 6-29: Landover Build Condition Weekday Peak 15-Minute Exiting Period Ridership

Metro Station	Time	2014		2022 No-build		2022 Build	
		Entries	Exits	Entries	Exits	Entries	Exits
Largo Town Center	5:00 PM – 5:15 PM	37	356	48	423	210	431

Source: WMATA (2014k); MWCOC (2015); Landover Site Transportation Agreement (Appendix A)

Table 6-30: Landover Build Condition Weekday Peak 15-Minute Entering Period Ridership

Metro Station	Time	2014		2022 No-build		2022 Build	
		Entries	Exits	Entries	Exits	Entries	Exits
Largo Town Center	7:30 AM – 7:45 AM	327	37	388	46	400	202

Source: WMATA (2014k); MWCOC (2015); Landover Site Transportation Agreement (Appendix A)

Metrorail Passenger Loads

Refer to section 3.10.4.3 for a detailed explanation of how Metrorail passenger loads were calculated. At Largo Town Center Metro Station, PM peak exits were the highest of AM peak entries, AM peak exits, PM peak entries, and PM peak exits, and therefore, were used to calculate maximum passenger loads. Projected passenger loads of 22 passengers under the Landover Build Condition at the station is well below 100 passengers per car, and therefore would be considered acceptable. Table 6-28 summarizes passenger loads per car under the Landover Build Conditions using PM peak 15-minute exits.

Station Capacity Analysis

Refer to section 3.10.4.3 for a detailed description of how station capacity was analyzed. Table 6-29 summarizes ridership during the peak exiting periods at Largo Town Center Metro Station.

Table 6-30 summarizes ridership during the peak entering period at Largo Town Center Metro Station.

Overall, vertical elements, faregate aisles, and fare vending machines at the station are projected to operate within capacity, or below a v/c of 0.7. Additionally, platform peak pedestrian LOS (based on the available spacing between passengers) on the busiest platform sections are projected to be at the acceptable LOS B. Further details on the station capacity analysis and emergency evacuation analysis are found in the Landover TIA (Appendix D).

Bus Analysis

Additional local bus trips associated with the Landover Build Condition are summarized in table 6-31. At a local bus mode split of 3.0 percent, approximately 99 additional AM peak hour bus passenger trips and 91 additional PM peak hour bus passenger trips are projected in the study area.

The additional peak hour bus passenger trips associated with the Landover Build Condition were added to the peak hour bus volumes calculated for the study area in the 2022 No-build Condition. The trips were added proportionally to each route within the study area based on No-build ridership. The overall analysis was limited to Metrobus service because no ridership data were available for TheBus. It can be assumed, however, that TheBus would see some minimal increases in ridership on routes that serve the site. For this analysis, it was assumed that there would be no major changes in bus service in the study area by 2022.

Overall, AM peak hour Landover Build Condition Metrobus volumes are projected to total 342 passengers, and PM peak hour volumes are projected to total 353 passengers. Both totals are below the overall capacity of services (see table 6-32) in the study area, meaning the additional passenger trips projected could be adequately handled by current service levels. At the individual route level, however, Route F14 in the northbound direction is projected to be over capacity by 2022 within the study area. Appendix D has further details on the bus capacity analysis.

Shuttles

To ensure the Metrorail modal split is obtainable, a connection between the Landover site and Largo Town Center Metro Station would be provided via shuttle bus. The shuttle route would likely use Brightseat Road, Landover Road, McCormick Drive, Lottsford Road, Harry S Truman Drive N, and Largo Drive W as illustrated in figure 6-34. The shuttle bus service would require the use of two bus bays at the Largo Town Center Metro Station. There are currently five unused bus bays of the ten bus bays at the station, and therefore no new bus bays would need to be constructed at the station to accomodate the shuttles. The Landover TIA (Appendix D) contains the detailed shuttle bus discussion and analysis in section 5.5.4.2.

Figure 6-34: Landover - Largo Town Center Metro Station Anticipated Shuttle Route

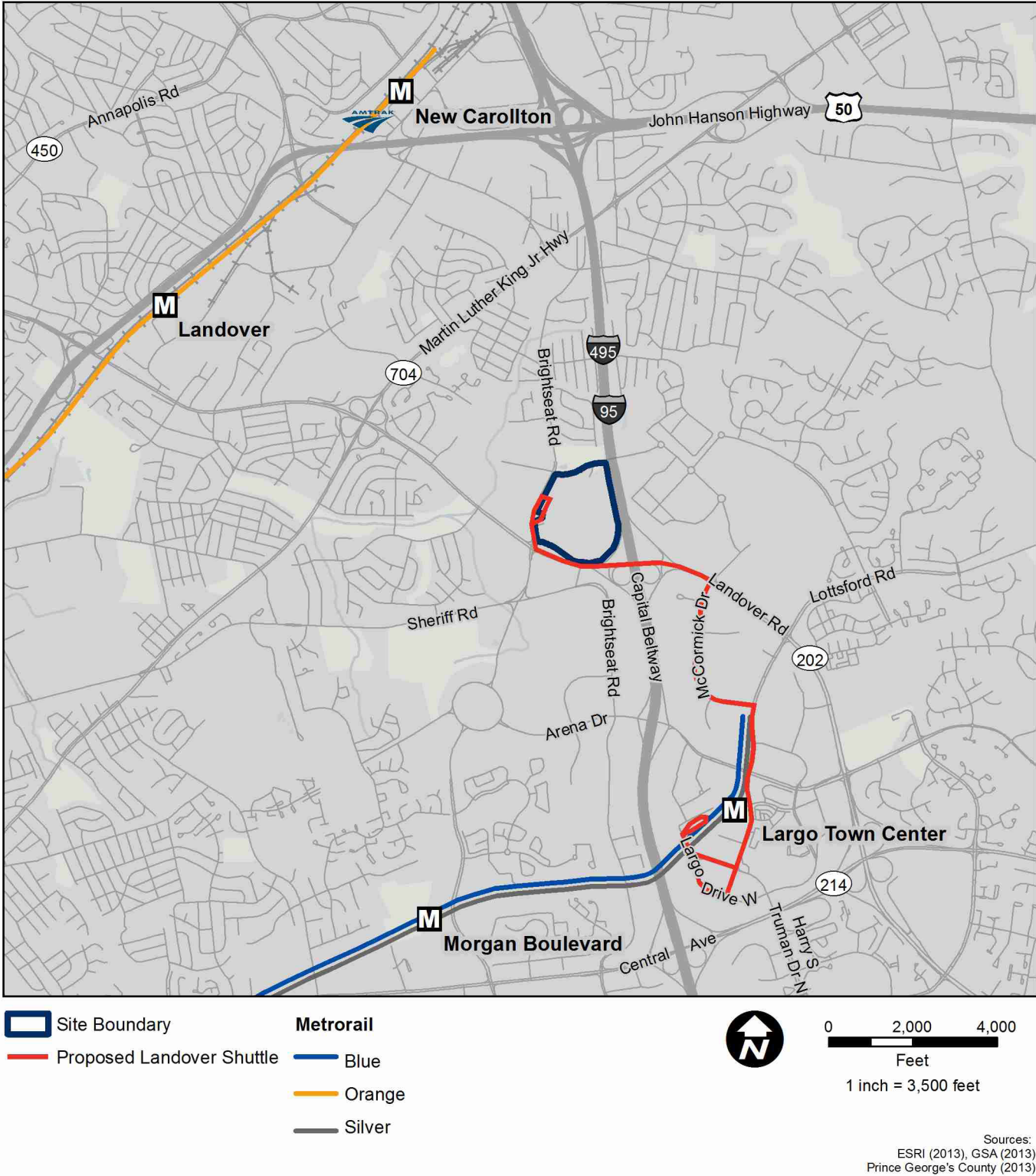


Table 6-31: Landover Build Condition Additional Peak Hour Local Bus Passenger Trips

Employees	Time Period	Proportion of Daily Total	Local Bus Mode Split	TOTAL LOCAL BUS TRIPS
11,055	AM Peak Hour	29.0%	3.0%	96
	PM Peak Hour	26.9%	3.0%	89
Briefing Center	Time Period	Proportion of Daily Total	Local Bus Mode Split	TOTAL LOCAL BUS TRIPS
250	AM Peak Hour	36.0%	3.0%	3
	PM Peak Hour	29.2%	3.0%	2
Total People	Time Period			TOTAL LOCAL BUS TRIPS
11,305	AM Peak Hour			99
	PM Peak Hour			91

Source: Landover Site Transportation Agreement (Appendix A)

Table 6-32: Landover Build Condition Bus Capacity Analysis

Measure	2014		2022 No-build		2022 Build	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Total Volume	210	226	243	262	342	353
Total Capacity	411	418	411	418	411	418
Volume to Capacity Ratio (V/C)	0.51	0.54	0.59	0.63	0.83	0.85

Source: Landover Site Transportation Agreement (Appendix A); Masog (2014); WMATA (2014j); MWCOG (2015)

LANDOVER PUBLIC TRANSIT ENVIRONMENTAL CONSEQUENCES SUMMARY

Build Condition:

Direct, long-term, adverse impacts to public transit capacity. Direct, long-term, major adverse impacts to bus operations. Direct, short-term, adverse impacts to bus operations from traffic delays due to construction. Direct, long-term, beneficial impacts for FBI employees.

LANDOVER PARKING ENVIRONMENTAL CONSEQUENCES SUMMARY

Build Condition:

No measurable impacts.

LANDOVER TRUCK ACCESS ENVIRONMENTAL CONSEQUENCES SUMMARY

Build Condition:

No measurable impacts.

Summary of Transit Analysis

The increase in public transit trips from the Landover Build Condition would have the following impacts to transit:

- Metrobus Route F14 would continue to have capacity issues due to its capacity issues present in the No-build Condition, given that no overall projected transit service increase or changes in Metrobus service are assumed in the analysis. The overall capacity of bus services in the study area, however, would accommodate the projected ridership.
- Metrorail car passenger loads through the study area are projected to be at acceptable levels.
- Overall, Metrorail vertical elements, faregate aisles, and fare vending machines at Largo Town Center Metro Station are projected to operate below capacity.
- Metrorail platform peak pedestrian LOS (based on the available spacing between passengers) on the busiest platform sections are projected to be at the acceptable LOS B at Largo Town Center Metro Station.
- Platform and station evacuation times would not increase over the No-build Condition, and therefore would continue to meet NFPA 130 standards.
- Site patrons using Metrorail would require a shuttle bus to reach the site from the Largo Town Center Metro Station, and the shuttle bus service would require the use of two bus bays at the station. The station currently has five unused bus bays, and therefore no new bus bays would need to be constructed at the station. The shuttle bus would contribute additional peak hour trips to the roadway network; this analysis of additional shuttle bus trips is included in the Landover TIA (Appendix D).

Therefore, the Landover Build Condition would have direct, long-term, adverse impacts to public transit capacity. In addition, bus operations (more than three bus routes) would have direct, long-term, major adverse impacts caused by the potential traffic delays forecasted along Brightseat Road (see the Landover TIA, section 5.7, “Traffic Analysis”).

Because buses regularly service Brightseat Road, there would be direct, short-term, adverse construction impacts to bus operations caused by construction vehicles blocking one or more lanes of the road and intermittent road closures.

The implementation of the shuttle between the Largo Town Center Metro Station and the Landover site would cause direct, long-term, beneficial impacts for FBI employees. Based on limiting the shuttle service to the use of FBI employees, there would be no impact to the overall public transit system. The actual shuttle service could operate along a different route and/or could be integrated into an existing or new route provided by a public or private provider.

Build Condition Parking

Under the Build Condition, employee parking garages would be located to the east of the Main Building Developable Area along the eastern site boundary, adjacent to the Capital Beltway. Given the distance to the nearest transit station, and in accordance with NCPC parking policy, a parking ratio of one parking space for every 1.5 employees would be maintained, equating to approximately 7,370 spots. It should be noted that this number does not reflect the non-seated workers and pool fleet, which would require additional parking spaces and would not be subject to NCPC parking policy. In the conceptual site layout analyzed in the EIS, these spaces would be accommodated in two, 10-story parking structures. The number and layout of the parking structures to accommodate the required employee and fleet vehicle parking would be finalized during the design process. Up to 323 visitor parking spaces would be provided near the Visitor Center.

While all employee and visitor parking is envisioned to be accommodated on-site, it is likely that there would be more employee demand for driving than there are parking spaces due to the less than 1:1 ratio of parking spaces to employees (not all employees would have a parking spot) as recommended by NCPC policies. Furthermore, transit options to the Landover site are minimal or may not be very convenient, and a shuttle would need to transport Metrorail riders from the Metrorail station to the Landover site potentially making the total trip time longer compared to driving. Therefore, there would be pressure on the local parking network to sustain those who drive to work but may not park on-site. Development and implementation of a Transportation Management Plan (TMP), which includes Transportation Demand Management (TDM) measures that would encourage employees to use transit and discourage employees from driving and parking off-site, would address these issues and reduce any adverse parking impacts anticipated at the Landover site. With implementation, monitoring, and enforcement of a TMP, and revisions as needed, the Build Condition would result in no measurable direct, long-term impacts to local area parking. Assuming all construction equipment and employee parking areas would be contained to the Landover site, there would be no measurable direct, short-term impacts during the construction period.

Build Condition Truck Access

Truck access for the Landover site would occur at the north entrance to the Landover site off of Evarts Street. Trucks would also only be permitted to enter and exit during non-peak hours. Truck entrance and exit locations and restricted hours would be noted at entrance locations and communicated to those services that would provide regular truck delivery to the site.

Therefore, under the Build Condition, there would be no measurable direct, long-term impacts to truck access given communication of truck access regulations. Assuming the Landover site would have access entrances and exits assigned for construction equipment and general trucks during the construction period, there would be no measurable direct, short-term impacts to truck access.

Build Condition Traffic Analysis

Refer to section 3.10.4.2 for a detailed description of the process the study followed to project future traffic volumes through three primary assumptions: trip generation, modal split, and trip distribution, followed by a discussion of the impacts of the proposed alternative.

Total Vehicle Trips

Based on the trip generation rates combined with the SOV and HOV modal split and persons per carpool, the total vehicle trips are forecasted to be 2,047 inbound and 149 outbound during the AM peak hour and 99 inbound and 1,931 outbound during the PM peak hour.

Tables 6-33 and 6-34 summarize the vehicle trips based on the trip generation and the mode split.

Table 6-33: Landover Build Condition AM Peak Hour Vehicle Trips

Calculated Steps	AM Peak Hour (7:30 AM - 8:30 AM)									
	FBI Employees				Briefing Center ^a				All People	
	Inbound		Outbound		Inbound		Outbound		TOTAL	
	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	Inbound	Outbound
Employees or Seats	11,055				250					
Trip Generation	29%				36%					
Inbound/Outbound Split	93%		7%		100%		0%			
Modal Split	63.3%	10.0%	63.3%	10.0%	63.3%	10.0%	63.3%	10.0%		
Total Trips w/o HOV adjustment	1,887	298	142	22	57	9	0	0		
HOV Vehicle Occupancy		3		3		3		3		
Total Trips	1,887	99	142	7	57	3	0	0	2,046	149

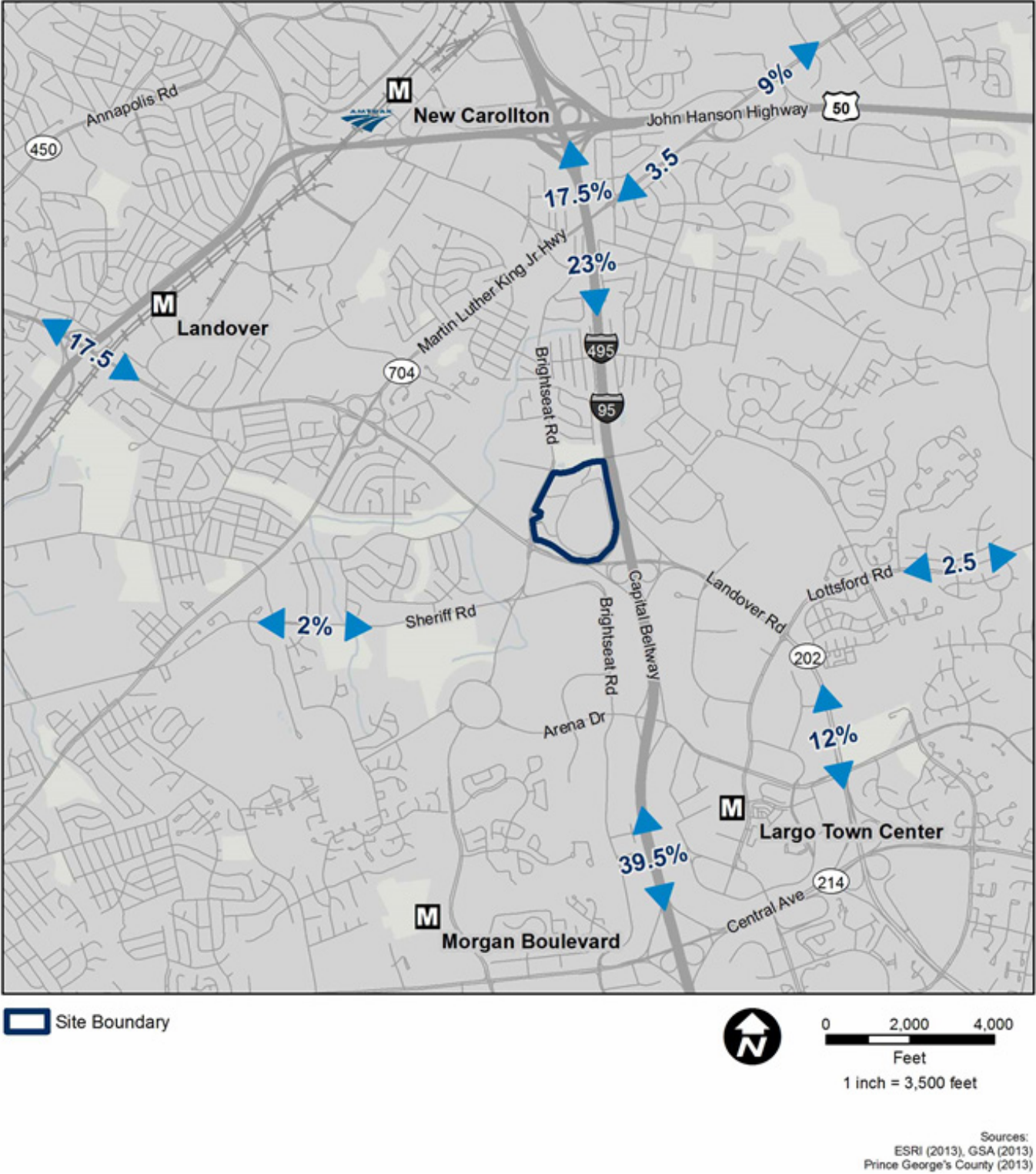
^a Assumes a 500-seat facility where external trips represent 50% of attendees.

Table 6-34: Landover Build Condition PM Peak Hour Vehicle Trips

Calculated Steps	PM Peak Hour (5:00 PM - 6:00 PM)									
	FBI Employees				Briefing Center ^a				All People	
	Inbound		Outbound		Inbound		Outbound		TOTAL	
	SOV	HOV	SOV	HOV	SOV	HOV	SOV	HOV	Inbound	Outbound
Employees or Seats	11,055				250					
Trip Generation	26.9%				29%					
Inbound/Outbound Split	5%		95%		0%		100%			
Modal Split	63.3%	10.0%	63.3%	10.0%	63.3%	10.0%	63.3%	10.0%		
Total Trips w/o HOV adjustment	94	15	1,788	283	0	0	46	7		
HOV Vehicle Occupancy		3		3		3		3		
Total Trips	94	5	1,788	94	0	0	46	2	99	1,931

^a Assumes a 500-seat facility where external trips represent 50% of attendees.

Figure 6-35: Landover Build Condition Trip Distribution



Trip Distribution

The process for determining trip distribution is detailed in section 3.10.4.2.

Table 6-35 shows the blended trip distribution percentages to/from each origin/destination. Note that the inbound versus outbound distribution patterns for vehicle trips destined to/from I-95 North and MD 704 are different, due to the expected travel pattern to reach U.S. Route 50 east of the site. It is assumed that inbound vehicles would use I-95/I-495 to U.S. Route 50 from the east and would use MD 704 NB north of the site to reach U.S. Route 50 East. Figure 6-35 depicts the Landover site trip distribution.

Development of Build Condition

Refer to section 3.10.4.3 for a description of how the Build Condition was developed for traffic analysis.

Figure 6-36 contains the Build Condition turning movement volumes. A diagram of Build Condition lane geometry can be found in the Landover TIA (Appendix D).

Table 6-35: Landover Site Trip Distribution Summary

Roadway and Direction	Percentages		AM Trips		PM Trips	
	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
I-95/I-495 NB North of Site	0.0%	17.5%	0	26	0	338
I-95/I-495 SB North of Site	23.0%	0.0%	471	0	23	0
I-95/I-495 South of Site	39.5%	39.5%	809	59	39	763
MD 704 NB North of Site	0.0%	9.0%	0	13	0	174
MD 704 SB North of Site	3.5%	0.0%	72	0	3	0
MD 202 WB	17.5%	17.5%	358	26	17	338
MD 202 EB	12.0%	12.0%	246	18	12	232
Lottsford Road EB	2.5%	2.5%	51	4	2	48
Sheriff Road WB	2.0%	2.0%	41	3	2	39
Total	100.0%	100.0%	2,047	149	99	1,931

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Figure 6-36: Landover Build Condition Turning Movement Volumes

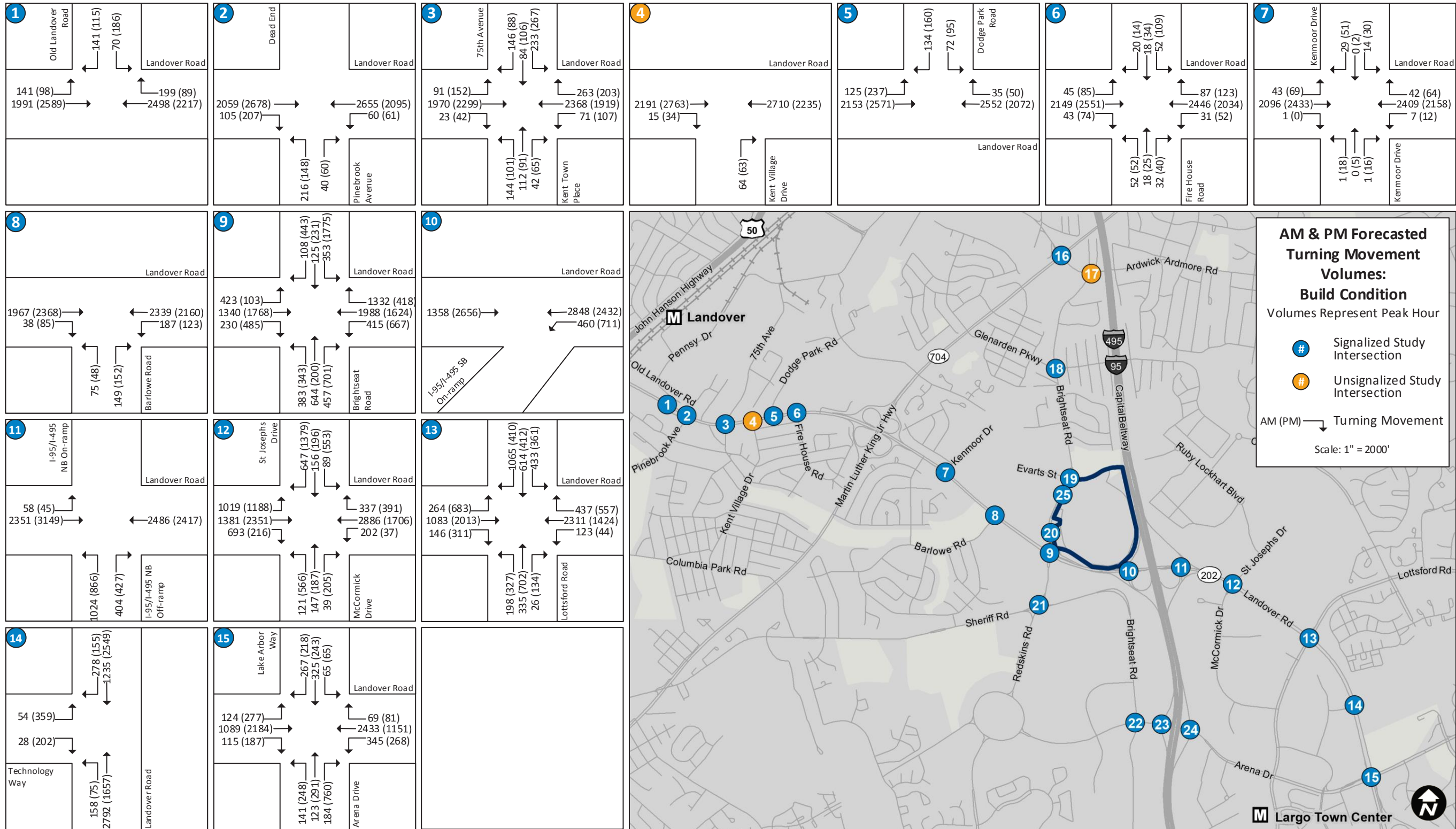
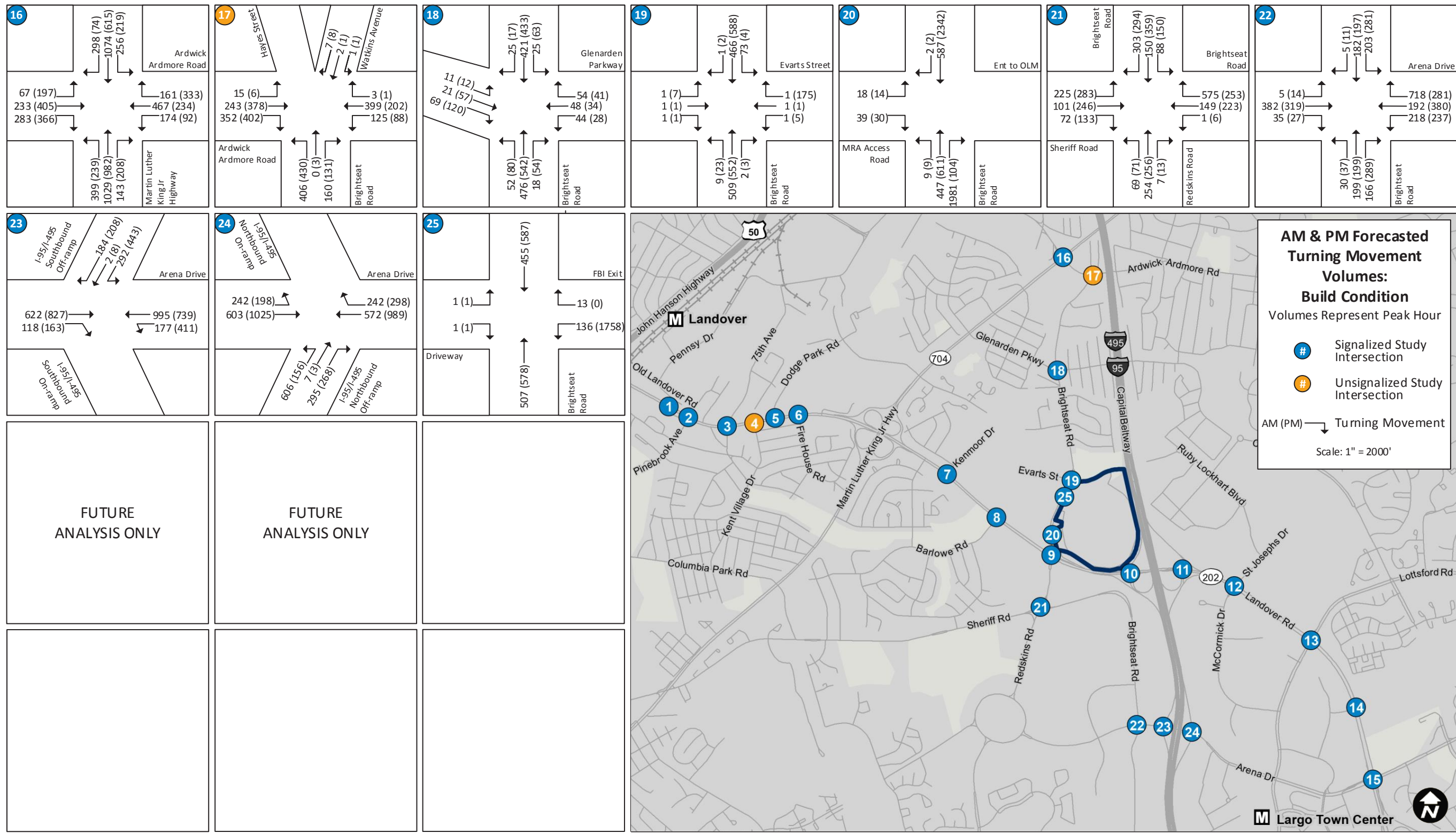


Figure 6-36: Landover Build Condition Turning Movement Volumes (continued)



**LANDOVER TRAFFIC
ENVIRONMENTAL CONSEQUENCES
SUMMARY**



Build Condition: Direct, long-term, major adverse impacts to corridors. Direct, long-term, adverse impacts to intersections. Direct, short-term, major adverse impacts during the construction period.

Build Condition Operations Analysis

Based on the Synchro™ and CLV-based Excel worksheet analysis, many of the signalized study area intersections would operate at acceptable overall conditions during the morning and afternoon peak hours. However, the following intersections in the study area would operate with overall unacceptable conditions:

- Landover Road and Kent Town Place/75th Avenue (Intersection #3) during the AM peak hour
- Landover Road and Brightseat Road (Intersection #9) during the AM and PM peak hour
- Landover Road and the I-95/I-495 Southbound On-ramp (Intersection #10) during the PM peak hour
- Landover Road and the I-95/I-495 Northbound Off-ramp (Intersection #11) during the PM peak hour
- Landover Road and St. Joseph’s Drive/ McCormick Drive (Intersection #12) during the PM peak hour
- Landover Road and Lottsford Road (Intersection #13) during the PM peak hour
- Martin Luther King Jr. Highway and Ardwick-Ardmore Road (Intersection #16) during the AM and PM peak hour
- Brightseat Road and Arena Drive (Intersection #22) during the AM peak hour

A total of 19 signalized intersections and 1 unsignalized intersection would experience unacceptable conditions for one or more turning movements. Compared to the No-build Condition, the Build Condition would have three more intersections failing during the AM peak hour and there would be one more intersection failing during the PM peak hour. The Landover TIA (Appendix D) contains a more detailed Build Condition traffic operations analysis.

The overall intersection LOS grades for the Build Condition are depicted in figure 6-37 for the AM and PM peak hours. Table 6-36 shows the results of the LOS capacity analysis and the intersection projected delay under the Build Condition during the AM and PM peak hours.

Build Condition Queuing Analysis

Based on the Synchro™ and SimTraffic™ analysis, 19 signalized intersections and 1 unsignalized intersection would experience queuing lengths that would exceed the available storage capacity. The remaining intersections in the study area would provide sufficient storage for the anticipated demand. Compared to the No-build Condition, the Build Condition, would have five more intersections with failing queues during the AM peak hour and would have three more intersections with failing queues during the PM peak hour. The Landover TIA (Appendix D) contains a more detailed Build Condition traffic queuing analysis.

Summary of Traffic Analysis: Build Condition

Overall, the AM peak hour would experience corridor-based delays along Landover Road (MD 202) in the westbound direction beginning at the I-95/I-495 northbound off-ramp intersection and extending past Brightseat Road. A similar condition would occur during the PM peak hour beginning at Brightseat Road and extending past McCormick Road/ St. Joseph’s Drive. Together these conditions would result in direct, long-term, major adverse impacts to corridors in the study area. In addition, there would be isolated intersection impacts during the AM and PM peak periods at the Martin Luther King Jr. Highway and Ardwick-Ardmore Road intersection and during the PM at the Brightseat Road and Ardwick-Ardmore Road intersection, resulting in direct, long-term, adverse impacts to intersections. Because the intersections between the Landover site and access to I-95/I-495 are forecasted to fail during the No-build Condition, adding construction-related trips along this route from trucks, employees, and equipment would have corridor-based impacts. Other construction-related trips may add to other isolated study area intersections forecasted to fail during the No-build Condition. Together, these conditions would result in direct, short-term, major adverse impacts during the construction period.

Figure 6-37: Landover Build Condition Intersection LOS for AM and PM Peak Hours

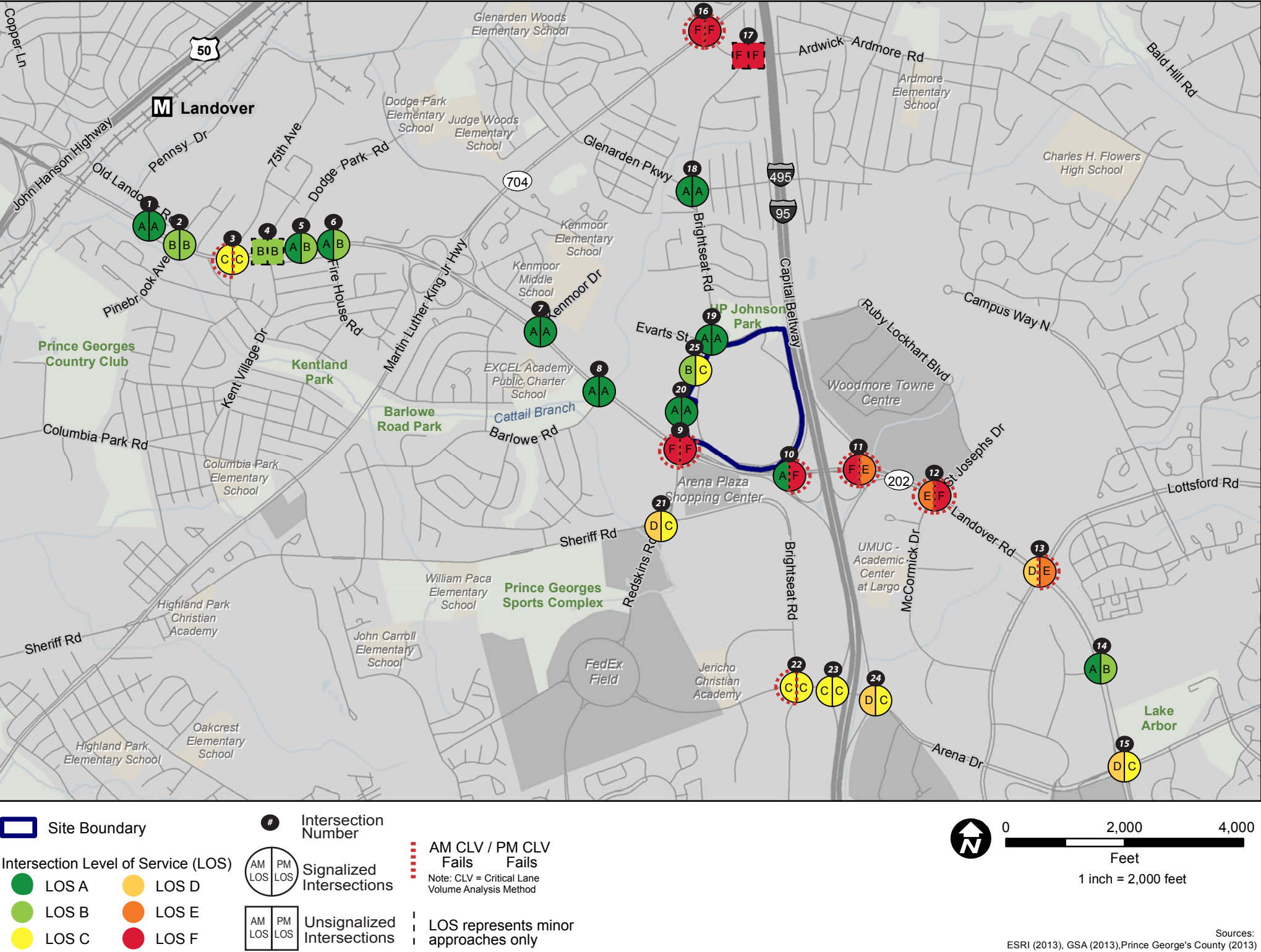


Table 6-36: Landover Build Condition Intersection AM and PM Peak Hour Operations Analysis

#	Intersection	No-build Condition										Build Condition									
		AM Peak Hour					PM Peak Hour					AM Peak Hour					PM Peak Hour				
		HCM 2000		CLV		Check	HCM 2000		CLV		Check	HCM 2000		CLV		Check	HCM 2000		CLV		Check
		Delay (sec/veh)	LOS	Critical Lane Vol	LOS		Delay (sec/veh)	LOS	Critical Lane Vol	LOS		Delay (sec/veh)	LOS	Critical Lane Vol	LOS		Delay (sec/veh)	LOS	Critical Lane Vol	LOS	
1	Landover Road & Old Landover Road (Signalized)																				
		8.3	A	1438	D	Pass	9.4	A	1179	C	Pass	8.0	A	1,447	D	Pass	9.7	A	1234	C	Pass
2	Landover Road & Pinebrook Avenue (Signalized)																				
		9.5	A	1189	C	Pass	10.8	B	1401	D	Pass	10.5	B	1198	C	Pass	10.2	B	1407	D	Pass
3	Landover Road & Kent Town Place/75th Avenue (Signalized)																				
		25.3	C	1608	F	Fail	28.0	C	1416	D	Pass	25.5	C	1617	F	Fail	30.9	C	1488	E	Pass
4	Landover Road & Kent Village Drive (TWSC)																				
		0.1	-	N/A	N/A	Pass	0.2	-	N/A	N/A	Pass	0.1	-	N/A	N/A	Pass	0.1	-	N/A	N/A	Pass
5	Landover Road & Dodge Park Road (Signalized)																				
		6.9	A	1167	C	Pass	11.2	B	1040	B	Pass	6.6	A	1176	C	Pass	11.3	B	1149	B	Pass
6	Landover Road & Fire House Road (Signalized)																				
		8.2	A	1186	C	Pass	15.3	B	1295	C	Pass	8.6	A	1196	C	Pass	17.0	B	1301	D	Pass
7	Landover Road & Kenmoor Drive (Signalized)																				
		8.5	A	956	A	Pass	5.1	A	977	A	Pass	8.2	A	966	A	Pass	5.8	A	983	A	Pass
8	Landover Road & Barlowe Road (Signalized)																				
		7.1	A	931	A	Pass	10.1	B	1072	B	Pass	8.1	A	1004	B	Pass	9.7	A	1079	B	Pass
9	Landover Road & Brightseat Road (Signalized)																				
		38.2	D	1220	C	Pass	55.1	E	1686	F	Fail	94.6	F	1750	F	Fail	264.9	F	2537	F	Fail
10	Landover Road & I-95/I-495 Southbound On-Ramp (Signalized)																				
		6.5	A	1181	C	Pass	27.7	C	1832	F	Fail	5.5	A	1207	C	Pass	97.5	F	2172	F	Fail
11	Landover Road & I-95/I-495 Northbound Off-Ramp (Signalized)																				
		45.6	D	1666	F	Fail	72.4	E	1863	F	Fail	106.6	F	2039	F	Fail	72.7	E	1894	F	Fail
12	Landover Road & St. Joseph's Drive/McCormick Drive (Signalized)																				
		52.3	D	1546	E	Pass	89.9	F	1921	F	Fail	72.4	E	1632	F	Fail	89.1	F	1925	F	Fail
13	Landover Road & Lottsford Road (Signalized)																				
		42.2	D	1507	E	Pass	63.5	E	1531	E	Fail	49.4	D	1581	E	Pass	68.8	E	1564	E	Fail

Table 6-37: Landover Build Condition Intersection AM and PM Peak Hour Operations Analysis (continued)

#	Intersection	No-build Condition										Build Condition									
		AM Peak Hour					PM Peak Hour					AM Peak Hour					PM Peak Hour				
		HCM 2000		CLV		Check	HCM 2000		CLV		Check	HCM 2000		CLV		Check	HCM 2000		CLV		Check
		Delay (sec/ veh)	LOS	Critical Lane Vol	LOS		Delay (sec/ veh)	LOS	Critical Lane Vol	LOS		Delay (sec/ veh)	LOS	Critical Lane Vol	LOS		Delay (sec/ veh)	LOS	Critical Lane Vol	LOS	
14	Landover Road & Technology Way (Signalized)																				
		2.8	A	1154	C	Pass	17.0	B	1291	C	Pass	3.0	A	1245	C	Pass	17.7	B	1377	D	Pass
15	Landover Road & Arena Drive/Lake Arbor Way (Signalized)																				
		34.2	C	1161	C	Pass	33.3	C	1166	C	Pass	35.8	D	1252	C	Pass	33.7	C	1252	C	Pass
16	Martin Luther King Jr Highway & Ardwick-Ardmore Road (Signalized)																				
		95.8	F	1906	F	Fail	68.9	E	1541	E	Fail	105.3	F	1919	F	Fail	86.6	F	1718	F	Fail
17	Brightseat Road & Ardwick-Ardmore Road (TWSC)																				
		176.1	-	N/A	N/A	Fail	32.9	-	N/A	N/A	Pass	183.7	-	N/A	N/A	Fail	162.6	-	N/A	N/A	Fail
18	Brightseat Road & Glenarden Parkway (Signalized)																				
		10.0	A	563	A	Pass	10.3	B	597	A	Pass	9.6	A	570	A	Pass	9.6	A	693	A	Pass
19	Brightseat Road & Evarts Street (Signalized)																				
		1.7	A	281	A	Pass	2.1	A	322	A	Pass	1.7	A	360	A	Pass	6.7	A	502	A	Pass
20	Brightseat Road & Entrance to Old Landover Mall (Ent to OLM)/Maple Ridge Apartments Access Road (MRA Access Rd) ^a																				
		0.8	-	N/A	N/A	Pass	0.7	-	N/A	N/A	Pass	5.6	A	303	A	Pass	4.8	A	734	A	Pass
21	Brightseat Road/Redskins Road & Sheriff Road/Brightseat Road (Signalized)																				
		36.4	D	413	A	Pass	33.0	C	596	A	Pass	48.3	D	811	A	Pass	32.9	C	597	A	Pass
22	Brightseat Road & Arena Drive (Signalized)																				
		21.3	C	1272	C	Pass	24.2	C	1589	E	Pass	23.0	C	1708	F	Fail	24.2	C	1589	E	Pass
23	Arena Drive & I-95/I-495 Southbound Ramps (Signalized)																				
		22.7	C	880	A	Pass	29.8	C	1344	D	Pass	23.8	C	1427	D	Pass	29.8	C	1346	D	Pass
24	Arena Drive & I-95/I-495 Northbound Ramps (Signalized)																				
		23.9	C	1203	C	Pass	28.8	C	1405	D	Pass	45.8	D	1465	E	Pass	28.8	C	1405	D	Pass
25	Brightseat Road & Driveway/FBI Exit (Signalized)																				
		-	-	-	-	-	-	-	-	-	-	10.8	B	242	A	Pass	20.7	C	1405	D	Pass

Notes:

LOS = Level of Service

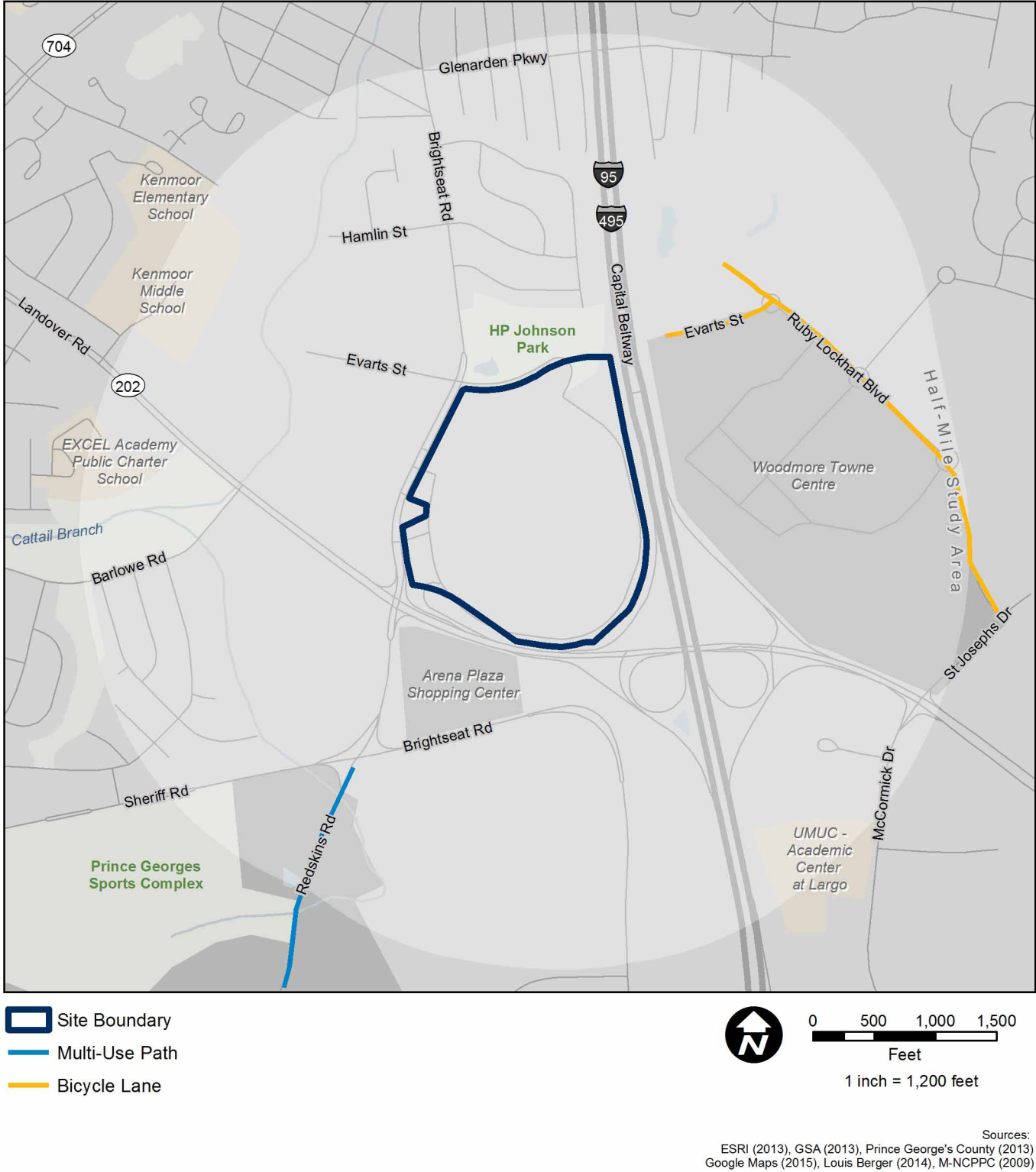
TWSC = Two-way STOP-Controlled unsignalized intersection (TWSC intersections do not have an overall LOS)

Delay is Measured in Seconds Per Vehicle.

Red cells denote intersections operating at unacceptable conditions.

^a Intersection would operate as a TWSC intersection under the No-build Condition and signalized under the Build Condition.

Figure 6-38: Landover Recommended Bicycle Mitigation



6.2.9.3 Build with Mitigation Condition

To reduce impacts to the transportation system from the Landover Alternative, mitigation measures are recommended for each mode of transportation analyzed. Overall, the Landover site requires extensive mitigation to reduce direct impacts.

The following transportation resources do not require any mitigation under the Landover Alternative: pedestrian network and truck access.

Build with Mitigation Condition Bicycles

To maximize the number of patrons accessing the site via bicycle, the site should be connected to the existing and planned bicycle network. It is recommended that, as part of the overall site and surrounding study area construction improvements (including roadway mitigation discussed in section 6.6.2), the three facilities that are planned directly adjacent to the site be constructed as mitigation for the Landover Build Condition, as summarized in table 6-37 and pictured in figure 6-38. While not directly adjacent to the site, an extension of the Evarts Street bicycle lanes west of Brightseat Road and an extension of the Cattail Branch River Trail north to Evarts Street would complete the bicycle network in the area, and should be considered by Prince George's County. It is recommended that the construction of the recommend multi-use paths be coordinated with the construction of the roadway improvements, to avoid adverse impacts to the multi-use paths.

When compared to the Build Condition, the impacts under the Build with Mitigation Condition would decrease from direct, long-term, adverse to direct, long-term, beneficial impacts caused by the addition of new corridor-based bicycle lanes and paths. Construction impacts would remain the same as the Build Condition, resulting in direct, short-term, adverse impacts to the bicycle network during the construction period.

Table 6-37: Landover Recommended Bicycle Mitigation

Roadway	From/To	Type
Landover Road (MD 202)	Brightseat Road to St. Joseph's Drive	Multi-Use Path
Brightseat Road	Sheriff Road to Evarts Street	Bicycle Lane
Evarts Street	Brightseat Road to east side of Evarts Street Bridge	Bicycle Lane

Build with Mitigation Condition Public Transit

The following recommendations in table 6-38 are made to mitigate the proposed transit impacts of the Landover Alternative.

When compared to the Build Condition, there would be no difference in long-term public transit capacity impacts under the Build with Mitigation Condition. Transit capacity would continue to have direct, long-term, adverse impacts until WMATA implemented increased capacity on Metrobus Route F14. However, the bus operation delays of more than two bus routes along Brightseat Road and Landover Road would be improved resulting in direct, long-term, beneficial impacts. During construction, the impacts would increase from direct, short-term, adverse to direct, short-term, major adverse impacts to bus operations (two or more bus routes impacted) caused by construction vehicles blocking on or more lanes on the road and intermittent road closures along Landover Road due to construction of roadway mitigations.

Build with Mitigation Condition Parking

As mentioned in the Build Condition section, parking impacts would largely be addressed through development and implementation of a TMP, which would include preferred strategies for discouraging employees from parking on local streets. Because the TMP would be implemented as part of the Build Condition, there would be no changes in parking impacts between the Build and Build with Mitigation Conditions.

When compared to the Build Condition, there would be no change in long-term impacts; therefore there would continue to be no measurable direct, long-term impacts under the Build with Mitigation Condition. Similarly, short-term construction impacts would not change between the Build and Build with Mitigation Conditions; therefore, there would continue to be no measurable direct, short-term impacts under the Build with Mitigation Condition during construction.

Build with Mitigation Condition Traffic Analysis

Development of Mitigated Network

Based on the Build Condition traffic operations and queuing analysis (defined in section 3.10.4.3), a number of intersections would fail and require mitigation. The dynamic traffic assignment (DTA) process (see section 3.10.4.3) was followed to identify the route vehicle trips would use after implementing the following proposed major mitigation strategies:

- Follow the latest revised conceptual site plan by adding a third exit driveway between the southern part of the Landover site and Brightseat Road, passing under Landover Road and connecting to Brightseat Road approximately 1,450 feet east of the Brightseat Road intersection with Sheriff Road (part of Alternative based on the Traffic analysis).
- Upgrading the intersection of Landover Road and Brightseat Road.
- Adding an additional travel lane in both directions along Landover Road between Brightseat Road and the I-95/I-495 northbound off-ramps.
- Constructing a bridge over I-95/I-495 connecting Evarts Street between Brightseat Road and Woodmore Towne Centre.

Prior to running the DTA to model the mitigation condition for determining the traffic assignment, the No-build vehicle volumes needed to be adjusted to reflect the opening of a new public road (Evarts Street Bridge). The Landover TIA contains the details covering the shift in vehicle patterns resulting from opening the Evarts Street Bridge and process and results from running the DTA (Appendix D). Figure 6-39 contains the Build with Mitigation Condition turning movement volumes.

Recommend Mitigation Measures

Section 3.10.2.3 contains the process followed to develop the full list of mitigation. Table 6-39 contains the list of recommended mitigation measures. Figure 6-40 shows the locations of the mitigation measures.

Table 6-38: Landover Public Transit Mitigation

Impact	Mitigation
Metrobus Route F14 would continue to have capacity issues during peak hours.	WMATA should perform a study of Metrobus Route F14 and develop recommendations to improve capacity during peak hours.
FBI employees using the Metrorail system would require shuttle bus service to access the site from the Metrorail. See section 5.4.4 of the Landover TIA (Appendix D) for a map of the shuttle route.	Implement shuttle bus service between Largo Town Center Metro Station and the Landover site.


LANDOVER PEDESTRIAN ENVIRONMENTAL CONSEQUENCES SUMMARY

 **Build with Mitigation Condition:**
Direct, long-term, beneficial impacts.

LANDOVER BICYCLE ENVIRONMENTAL CONSEQUENCES SUMMARY

 **Build with Mitigation Condition:**
Direct, long-term, beneficial impacts.
Direct, short-term, adverse impacts.

LANDOVER PUBLIC TRANSIT ENVIRONMENTAL CONSEQUENCES SUMMARY

 **Build with Mitigation Condition:**
Direct, long-term, adverse impacts to transit capacity, and direct, long-term, beneficial impacts to bus operations.

LANDOVER PARKING ENVIRONMENTAL CONSEQUENCES SUMMARY

 **Build with Mitigation Condition:**
No measurable impacts.

LANDOVER TRUCK ACCESS ENVIRONMENTAL CONSEQUENCES SUMMARY

 **Build with Mitigation Condition:**
No measurable impacts.

Figure 6-39: Landover Build with Mitigation Condition Turning Movement Volumes

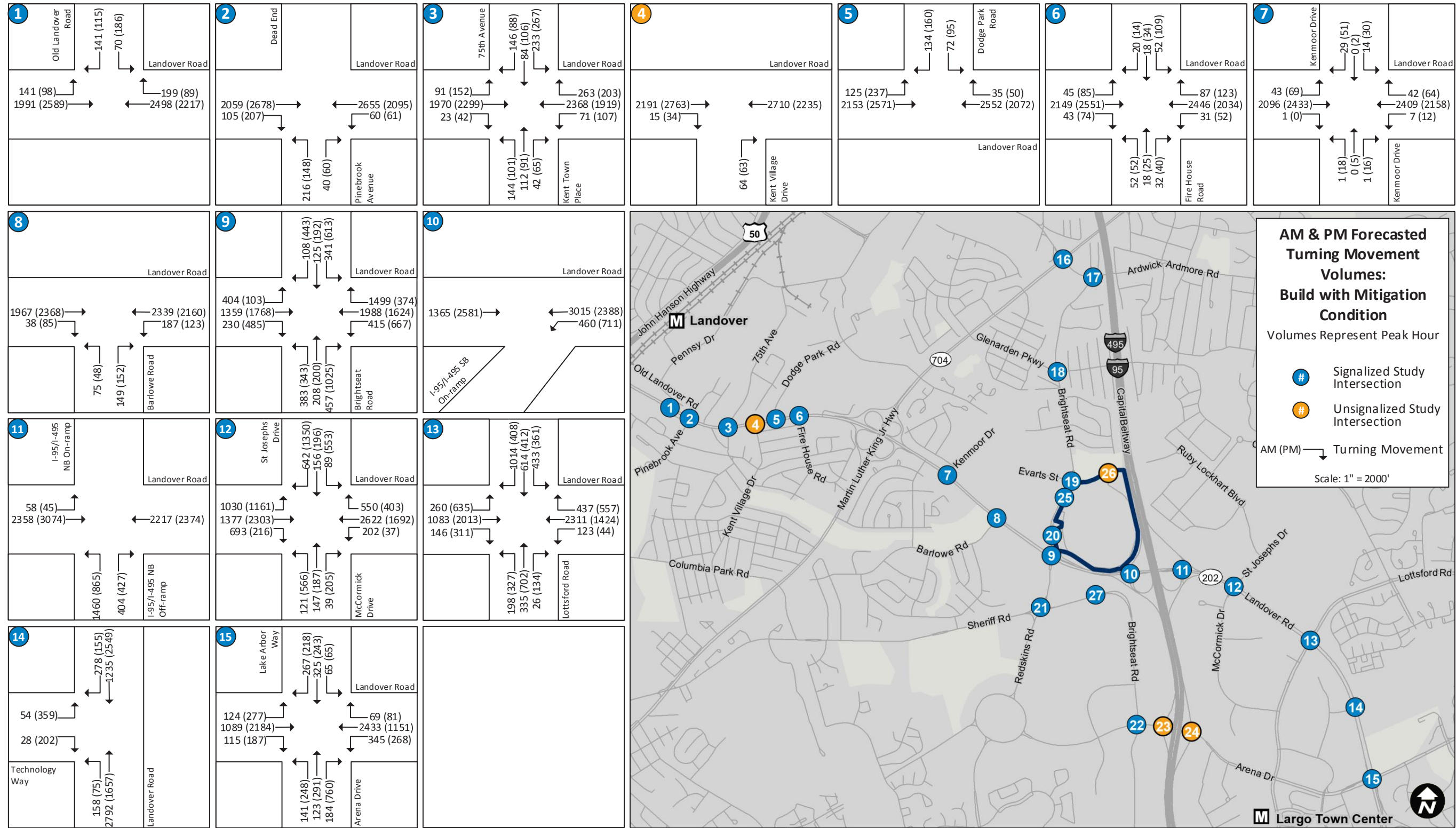


Figure 6-39: Landover Build with Mitigation Condition Turning Movement Volumes (continued)

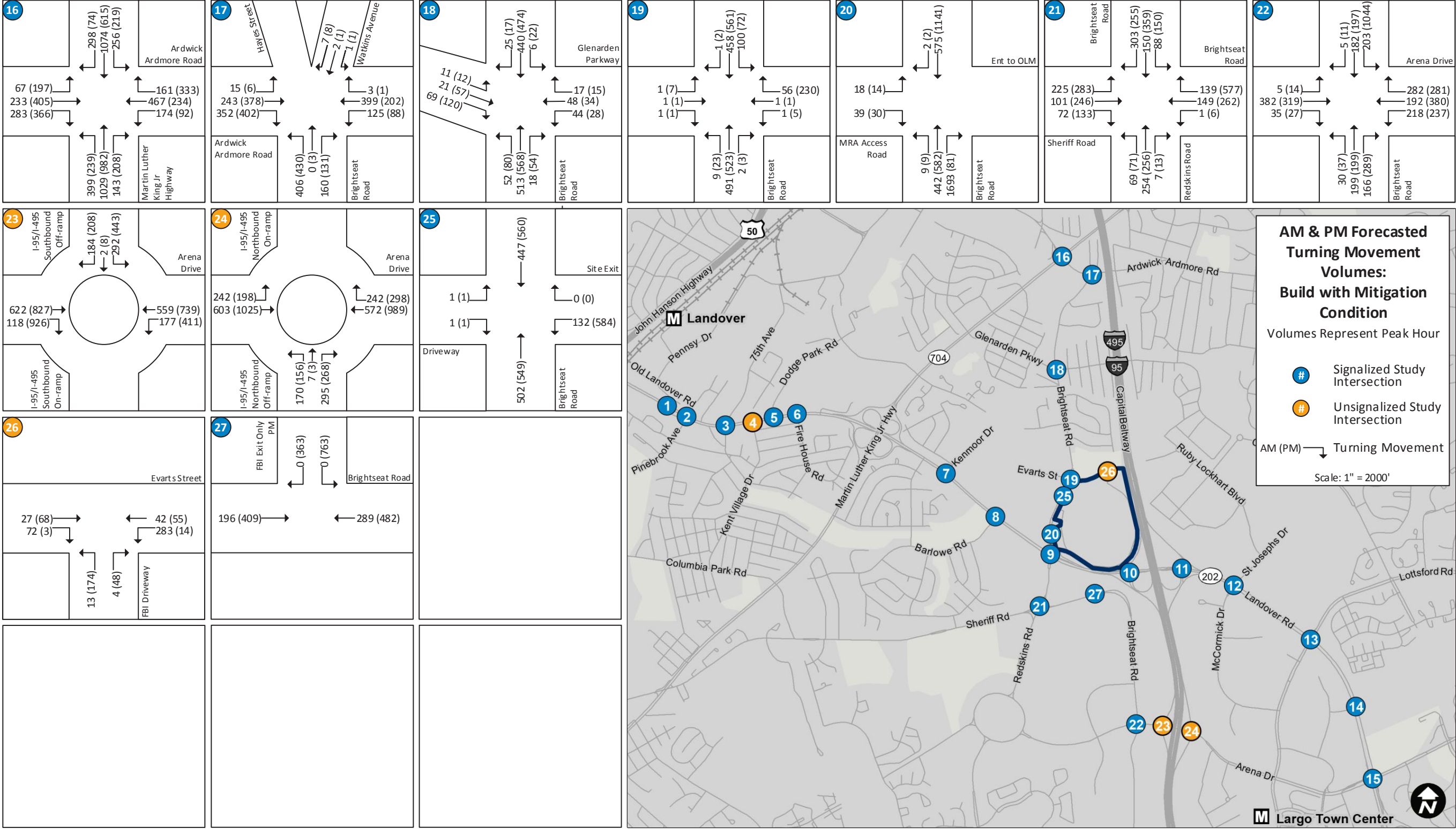


Table 6-39: Landover Alternative Recommended Mitigation Measures

Map ID	Location	Mitigation	Strip Land Taking (Approximate Linear Feet)
A	Landover Road (MD 202) and Old Landover Road	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for the PM peak period. 	None
B	Landover Road (MD 202) and Dodge Park Road	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for the PM peak period. 	None
C	Landover Road (MD 202) and Firehouse Road	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for the PM peak period. 	None
D	Landover Road (MD 202) and Kenmoor Road	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for AM and PM peak periods. 	None
E	Landover Road (MD 202) and Barlowe Road	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for AM and PM peak periods. 	None
F	Landover Road (MD 202) and Brightseat Road	<ul style="list-style-type: none"> For the Landover Road eastbound approach, extend both left-turn lanes by 260 feet resulting in two 600-foot left-turn lanes, convert the existing 1,000 foot right-turn lane into a through lane, and create a new 400-foot right-turn lane to provide an approach with two left-turn lanes, four through lanes, and one right-turn lane. For the Landover Road westbound approach, create a new 775-foot right-turn lane to provide an approach with two-left-turn lanes, three through lanes, and two right-turn lanes. The right turn lanes would no longer be free movements, but would be under signal control. A two-lane right turn lane requires signal control for safety to allow the other movements leading to Brightseat Road northbound full access to the all available lanes. For the Brightseat Road northbound approach, extend the right most left-turn lane 350 feet back to the previous intersection (driveway serving Brightseat Road Property development), separate the right turn lanes from the through lanes, and create a new 400-foot right-turn lane to provide an approach with two left-turn lanes, two through lanes, and two right-turn lanes. For the Brightseat Road southbound approach, create a new 350 foot left-turn lane and 350-foot right-turn lane to provide an approach with three left-turn lanes, one through lane, one shared through/right-turn lane, and one right-turn lane. The right-turn lanes would no longer be free movements, but would be under signal control. Revise the traffic signal pattern from a split phase timing for Brightseat Road (north and south movements occur separately) to a protected lead-lag phase timing (similar to Landover Road approaches). Adjust the signal to provide a lead turn phase (occurs at the same time as the through movement) for the southbound left-turns and lag phase (occurs at the end of the through movements) for the northbound left-turns to allow vehicles to share the existing turning intersection geometry in the middle of the intersection. 	760
G	Landover Road (MD 202) and I-95 Southbound on-ramp	<ul style="list-style-type: none"> For the Landover Road eastbound approach, add a third through lane extended back 1,750 feet to the Brightseat Road intersection, resulting in a four-lane MD 202 eastbound cross section between Brightseat Road and the I-95 southbound off-ramp. For the Landover Road westbound approach, add a third through lane extended 1,100 feet back to the previous intersection (I-95 northbound off-ramps), resulting in a four-lane MD 202 westbound cross section. Widen the Landover Road Bridge over I-95 by two lanes to the north to avoid impacting the existing loop ramps in the SE and SW corner of the interchange. Optimize the traffic signal and coordinate timings with nearby key intersections for AM and PM peak periods. 	530

Table 6-39: Landover Alternative Recommended Mitigation Measures (continued)

Map ID	Location	Mitigation	Strip Land Taking (Approximate Linear Feet)
H	Landover Road (MD 202) and I-95 northbound off-ramp	<ul style="list-style-type: none"> For the Landover Road eastbound approach, add a fourth through lane extended 1,100 feet back to the previous intersection (I-95 southbound on-ramp), resulting in a four-lane Landover Road eastbound cross section spanning the bridge over I-95. Extend the left-turn lane 100 feet resulting in a 250-foot left-turn lane. For the Landover Road westbound approach, add a third through lane extended 300 feet back to the I-95 northbound on-ramp diverge from Landover Road. For the I-95 off-ramp approach, add a 400-foot third left-turn lane to provide an approach with three left-turn lanes and one right-turn lane. Optimize the traffic signal and coordinate timings with nearby key intersections for AM and PM peak periods. 	None
I	Landover Road (MD 202) and McCormick Drive/St. Joseph's Drive	<ul style="list-style-type: none"> Optimize the traffic signal for the PM peak period and coordinate timings with nearby key intersections for AM and PM peak periods. 	None
J	Landover Road (MD 202) and Lottsford Road	<ul style="list-style-type: none"> For the Lottsford Road southbound approach, create a new 350-foot left-turn lane to provide an approach with two left lanes, two through lanes, and one right-turn lane. For the Lottsford Road northbound approach, revise the existing lane geometry to provide an approach with two left-turn lanes, two through lanes, and one right-turn lane. Optimize the traffic signal and coordinate timings with nearby key intersections for the AM and PM peak periods. 	None
K	Landover Road (MD 202) and Technology Way	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for AM and PM peak periods. 	None
L	Landover Road (MD 202) and Arena Drive/Lake Arbor Way	<ul style="list-style-type: none"> Coordinate timings with nearby key intersections for AM and PM peak periods. 	None
M	Martin Luther King Jr. Highway (MD 704) and Ardwick-Ardmore Road	<ul style="list-style-type: none"> For the Ardwick-Ardmore Road eastbound approach, revise the lane geometry to provide an approach with one right-turn lane, one through lane, and one shared through/left-turn lane. For the Ardwick-Ardmore Road westbound approach, install dynamic lane controls depending on the time of the day. Use the existing lane geometry during all times except during the PM peak period. During the PM peak period assign the left lane for shared through/left-turns only and the right lane for right-turns only. Optimize the traffic signal for AM and PM peak periods. 	None
N	Ardwick-Ardmore Road and Brightseat Road	<ul style="list-style-type: none"> Install new traffic signal at Brightseat Road and Ardwick-Ardmore Road. For the Brightseat Road northbound approach, extend the right-turning lane along Brightseat Road northbound by 50 feet to a new length of 200 feet. 	None
O	Evarts Street Bridge	<ul style="list-style-type: none"> Construct a new four-lane bridge over I-95 to connect the east and west parts of Evarts Street. 	None
P	Brightseat Road and Site West Entrance/Maple Ridge Apartment south entrance	<ul style="list-style-type: none"> Upgrade the Build Condition traffic signal to serve exiting vehicles from the apartments only, allowing right or left-turns only. The traffic signal would not serve Brightseat Road northbound through or right-turn movements. Install a raised triangular curb in the middle of the intersection to allow left-turns from Brightseat Road northbound to the apartments and left-turns from the apartments to Brightseat Road northbound. Through moves from the apartments to the Site West Entrance would not be possible. The two Brightseat Road northbound through lanes would shift right after the intersection to allow the left-lane to only serve vehicles turning left from the apartments. For the Brightseat Road northbound approach, change the lane geometry to provide an approach with two right-turn lanes, a shared through/right-turn lane, one through lane, and one left-turn lane. 	None

Table 6-39: Landover Alternative Recommended Mitigation Measures (continued)

Map ID	Location	Mitigation	Strip Land Taking (Approximate Linear Feet)
Q	Brightseat Road/Redskins Road and Sheriff Road/ Brightseat Road	<ul style="list-style-type: none"> For the Redskins Road northbound approach, revise the lane geometry to provide an approach with one left-turn lane, two through lanes, and one right-turn lane. For the Brightseat Road westbound approach, revise the signing on the channelized right-turn to indicate a free merge. Revise the lane striping north of the intersection along Brightseat Road to clearly indicate that the right-most lane is closed to traffic to allow the westbound approach right-turn lane a free merge onto Brightseat Road northbound. One option is to replace the white lines with a 150-foot yellow stripe between the right and middle lanes from the intersection to the westbound right-turn lane merge. Optimize the traffic signal for AM and PM peak periods. 	None
R	Brightseat Road and Site South Exit	<ul style="list-style-type: none"> Install a new traffic signal to serve the intersection during the PM only. Widen Brightseat Road in the southbound direction by one lane to form two 1,000-foot southbound travel lanes between the new FBI south exit intersection and the existing four-lane cross section 	None
S	Brightseat Road and Arena Drive	<ul style="list-style-type: none"> For the Brightseat Road northbound approach, revise the lane geometry to provide one left-turn lane, one through lane, and one right-turn lane. For the Brightseat Road southbound approach, extend the left-turn lane by 290 feet to create a 500-foot left-turn lane and revise the lane geometry to provide two left-turn lanes and one shared through/right-turn lane. For the Arena Drive westbound approach, revise the lane geometry to provide one shared left-turn/ through lane, one through lane, and one right-turn lane. Optimize the traffic signal for the PM peak period. 	200
T	Arena Drive and I-95 southbound on/off ramps	<ul style="list-style-type: none"> Replace the intersection with a two-lane roundabout. For the Arena Drive eastbound approach, revise the lane geometry to stripe the two left lanes to enter the roundabout and the right lane to provide a bypass lane that feeds directly onto the I-95 southbound on-ramp. For the Arena Drive westbound approach, revise the lane geometry to provide two lanes to enter the roundabout. For the I-95 southbound off-ramp, stripe the existing lanes to enter the roundabout and create a 200-foot right-turn lane to provide a bypass lane that feeds directly onto Arena Drive westbound. 	None
U	Arena Drive and I-95 northbound on/off ramps	<ul style="list-style-type: none"> Replace the intersection with a two-lane roundabout. For the Arena Drive eastbound approach, revise the lane geometry to provide two lanes to enter the roundabout. For the Arena Drive westbound approach, revise the lane geometry to provide two lanes to enter the roundabout. For the I-95 northbound off-ramp, stripe the existing lanes to enter the roundabout and create a 150-foot right-turn lane to provide a yielding bypass lane that feeds directly onto Arena Drive westbound. 	None

Figure 6-40: Landover Build with Mitigation Condition Improvement Locations

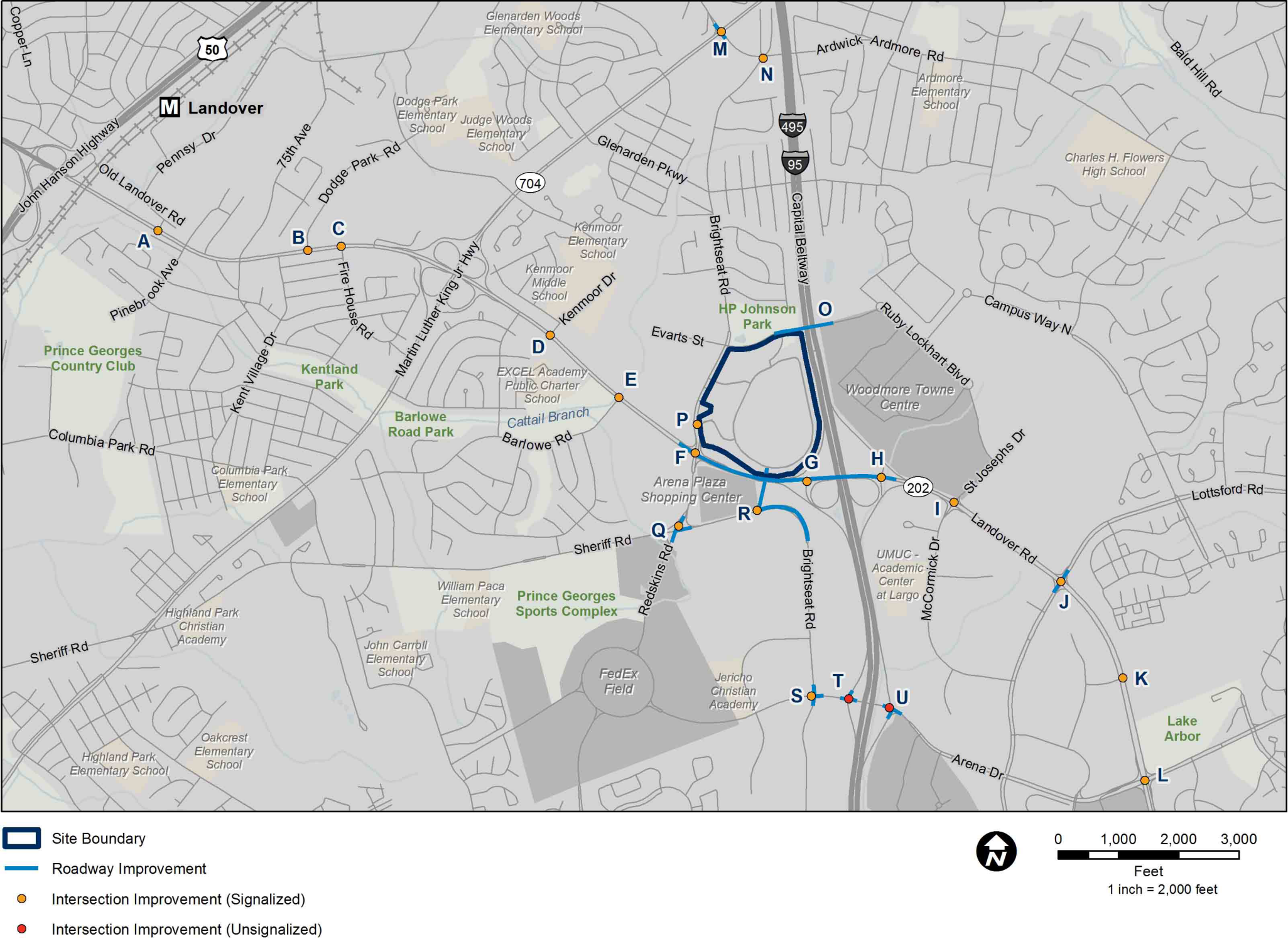
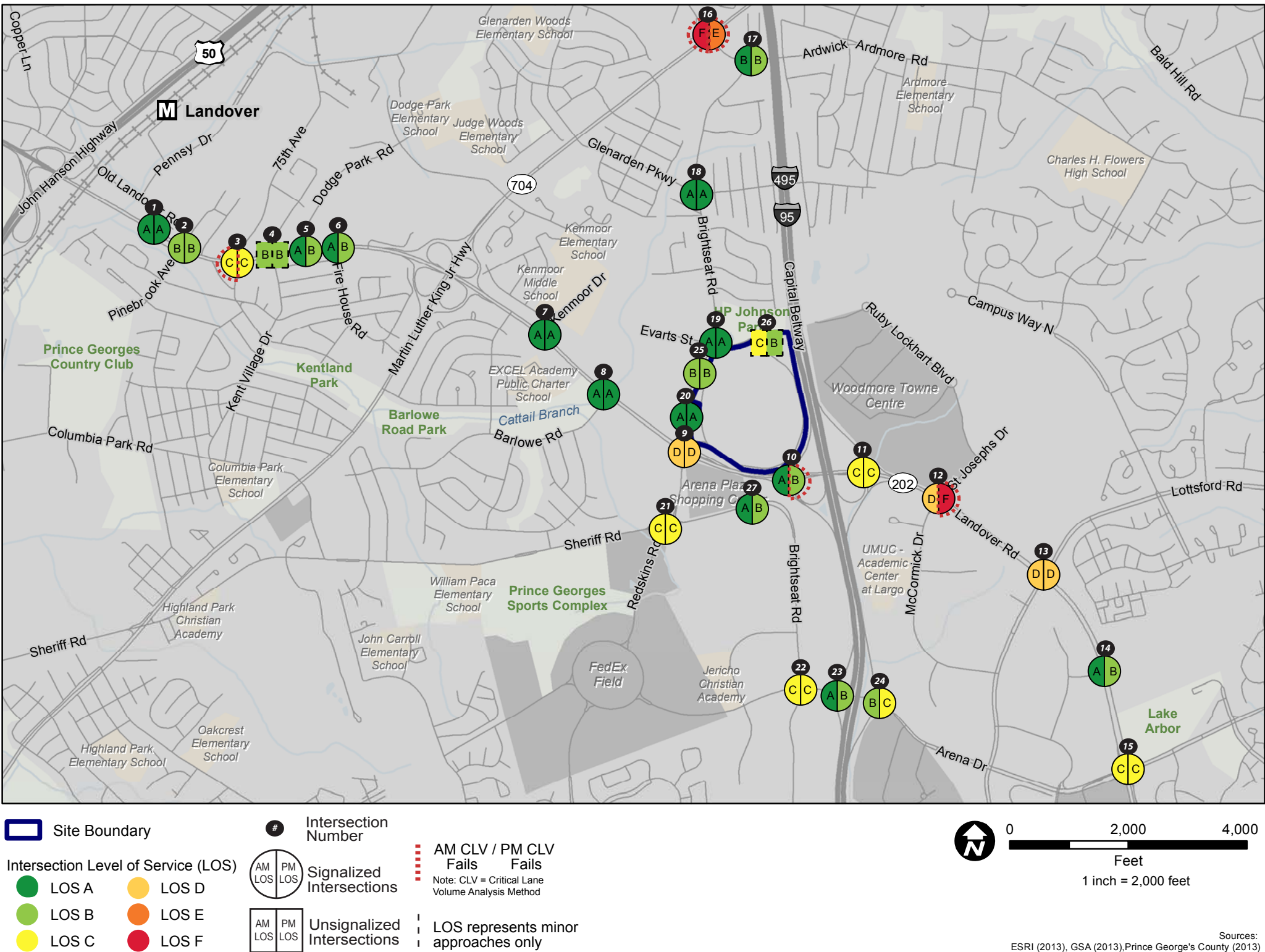


Figure 6-41: Landover Build with Mitigation Condition Intersection LOS for AM and PM Peak Hour



Build with Mitigation Condition Intersection Operations Analysis

Based on the Synchro™ and CLV-based Excel worksheet analysis with the proposed mitigation, all but four signalized study area intersection would operate at acceptable overall conditions during the morning and afternoon peak hours. The following intersection in the study area would operate with overall unacceptable conditions:

- Landover Road and Kent Town Place/75th Avenue (Intersection #3) during the AM peak hour (same failure in No-build)
 - Note that the Build with Mitigation Condition would result in less than a one percent difference in CLV when compared to the No-build Condition**
- Landover Road and the I-95/I-495 Southbound On-ramp (Intersection #10) during the PM peak hour
 - Note that the Build with Mitigation Condition would result in a better operation than the No-build Condition**
- Landover Road and St. Joseph's Drive/McCormick Drive (Intersection #12) during the PM peak hour
 - Note that the Build with Mitigation Condition would result in a better operation than the No-build Condition**
- Martin Luther King Jr. Highway and Ardwick-Ardmore Road (Intersection #16) during the PM peak hour
 - Note that the Build with Mitigation Condition would result in a better operation than the No-build Condition**